REPORT OF

MISSOURI DEPARTMENT OF TRANSPORTATION AND HIGHWAY PATROL EMPLOYEES' RETIREMENT SYSTEM

JUNE 30, 2015

WILLIAMS KEEPERS LLC
CERTIFIED PUBLIC ACCOUNTANTS & CONSULTANTS

2005 West Broadway, Suite 100, Columbia, MO 65203
OFFICE (573) 442-6171 FAX (573) 777-7800

3220 West Edgewood, Suite E, Jefferson City, MO 65109
OFFICE (573) 635-6196 FAX (573) 644-7240

www.williamskeepers.com

INDEPENDENT AUDITORS' REPORT

The Board of Trustees
Missouri Department of Transportation and
Highway Patrol Employees' Retirement System

Report on the Financial Statements

We have audited the accompanying statements of fiduciary net position of the Missouri Department of Transportation and Highway Patrol Employees' Retirement System (the System), as of June 30, 2015 and 2014, and the related statements of changes in fiduciary net position for the years then ended, and the related notes to the financial statements, which collectively comprise the System's basic financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with U.S. generally accepted auditing standards. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the System's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the System's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the System at June 30, 2015 and 2014, and the changes in fiduciary net position for the years then ended, in conformity with U.S. generally accepted accounting principles.

Other Matters

Required Supplementary Information

U.S. generally accepted accounting principles require that the management's discussion and analysis on pages 3 through 7 and the schedules of employers' net pension liability, changes in the employers' net pension liability, employers' contributions, investment returns, OPEB funding progress, and related notes on pages 30 through 33 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context.

We have applied certain limited procedures to the required supplementary information in accordance with U.S. generally accepted auditing standards, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audits were conducted for the purpose of forming an opinion on the financial statements that collectively comprise the System's financial statements as a whole. The additional information presented on pages 34 through 36 are presented for purposes of additional analysis and are not a required part of the financial statements.

The additional information is the responsibility of management and was derived from and relate directly to the underlying accounting and other records used to prepare the financial statements. The additional information has been subjected to the auditing procedures applied in the audits of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with U.S. generally accepted auditing standards. In our opinion, the additional information presented on pages 34 through 36 is fairly stated in all material respects in relation to the basic financial statements as a whole.

Williams-Keepers LLC

November 10, 2015

MISSOURI DEPARTMENT OF TRANSPORTATION AND HIGHWAY PATROL EMPLOYEES' RETIREMENT SYSTEM

MANAGEMENT'S DISCUSSION AND ANALYSIS

The management of the Missouri Department of Transportation and Highway Patrol Employees' Retirement System (the System, or MPERS) provides this discussion and analysis of the System's financial performance for the fiscal years ended June 30, 2015 and 2014. While this discussion is intended to summarize the financial status of MPERS, readers should consider this information in conjunction with the information that is furnished in the more detailed financial statements and corresponding notes.

DESCRIPTION OF BASIC FINANCIAL STATEMENTS

As required by the Governmental Accounting Standards Board (GASB) accounting standards, this financial report consists of *Management's Discussion and Analysis* (this section), the basic financial statements (including notes to the basic financial statements), and other required supplementary information.

Financial Statements report information about MPERS, using accounting methods similar to those used by private-sector companies, by using the economic resources measurement focus and accrual basis of accounting. These statements provide both long-term and short-term information about the System's overall financial status. These statements follow this *Management's Discussion and Analysis* section:

- The *Statement of Fiduciary Net Position* includes all the System's assets and liabilities, with the difference between the two reported as net position.
- The *Statement of Changes in Fiduciary Net Position* accounts for all the current year's additions (income) and deductions (expenses), regardless of when cash is received or paid.

Notes to the Financial Statements are included following the financial statements. The notes to the financial statements provide additional information that is essential for a full understanding of the data provided in the financial statements.

Required Supplementary Information follows the notes and further supports the information in the financial statements.

ANALYSIS OF FINANCIAL POSITION AND RESULTS OF OPERATIONS

Overall, the financial position of MPERS improved by $52 million, reported as the "net increase." This is primarily a result of net appreciation in the fair value of investments for the year ended June 30, 2015. With this net increase in value in FY15, the funded status of the plan showed an increase of 3.76%.

The following schedules present summarized comparative data from the System's financial statements for each of the fiscal years ended June 30, 2015, 2014, and 2013. Following each schedule is a brief summary providing explanation and analyses of the major reasons for changes in the condensed financial statements.

Summarized Comparative Statements of Fiduciary Net Position

	As of June 30, 2015	As of June 30, 2014	As of June 30, 2013	% Change 2015/2014	% Change 2014/2013
Cash and Receivables	$23,606,579	$15,256,813	$39,152,820	55	-61
Investments	1,991,396,397	1,937,710,335	1,651,622,264	3	17
Invested Securities Lending Collateral	80,780,418	86,192,337	92,327,975	-6	-7
Capital Assets	1,921,467	2,283,961	2,627,203	-16	-13
Other Assets	6,366	5,899	69,961	8	-92
Total Assets	$2,097,711,227	$2,041,449,345	$1,785,800,223	3	14
Accounts Payable	3,994,860	7,784,728	5,298,016	-49	47
OPEB Obligation	643,809	599,399	554,370	7	8
Securities Lending Collateral	83,705,424	75,609,005	94,215,127	11	-20
Total Liabilities	$88,344,093	$83,993,132	$100,067,513	5	-16
Net Position	$2,009,367,134	$1,957,456,213	$1,685,732,710	**3**	**16**

The increase in cash and receivables is primarily attributable to higher investment sales receivables as of June 30, 2015. Some fluctuations in this area are normal, based on investment activity. The decrease from FY13 to FY14 is primarily attributable to lower investment sales receivables which were normal fluctuations based on investment activity.

The System's investments represent the main component of total assets. These investments include holdings of stock, government-sponsored enterprises, bonds, mortgages, real estate, timber, hedge funds, securities lending collateral, limited partnerships, and other fixed income investments. The increase in fair value of investments as of June 30, 2015 is due to favorable market conditions experienced during FY15. The FY15 investment return was 6.62%. The increase in fair value from FY13 to FY14 is due to higher than expected investment returns of 17.59%.

Capital assets decreased in FY15 and FY14 due to depreciation of existing assets and only minimal purchases of new equipment during the year.

The largest component of liabilities is securities lending collateral. This represents the amount owed for

collateral to be returned as the result of securities lent. The increase in securities lending collateral liability from FY14 to FY15 is due to the increase in the fair value of investments and changes in securities lending provider policies. The decrease in securities lending collateral liability from FY13 to FY14 is due to fewer securities being utilized for lending. The corresponding securities lending collateral asset is valued at a lower amount at June 30, 2015 due to the market value of the securities on loan being less than the par value. The corresponding securities lending collateral asset is valued at a higher amount at June 30, 2013 due to the market value of the securities on loan being more than par value.

The decrease in accounts payable for FY15 is primarily attributable to lower investment purchases payable and the increase in accounts payable for FY14 is primarily attributable to higher investment purchases payable. Some fluctuations in this area are normal, based on investment activity.

The OPEB obligation liability of $643,809 at June 30, 2015, $599,399 at June 30, 2014, and $554,370 at June 30, 2013 reflects the System's provision of post-employment health care benefits through its participation in the MoDOT and MSHP Medical and Life Insurance Plan. This plan is an internal service fund of the Missouri Department of Transportation (MoDOT); therefore, assets have not been set aside. With this, the increases from FY14 to FY15 and from FY13 to FY14 are expected.

The System's total net position was $2.009 billion at June 30, 2015, a $52 million increase from the $1.957 billion at June 30, 2014. This is in addition to an increase of the previous year, when net position increased $272 million from the June 30, 2013 amount of $1.685 billion to the June 30, 2014 amount of $1.957 billion.

Summarized Comparative Statements of Changes in Fiduciary Net Position

	Year Ended June 30, 2015	Year Ended June 30, 2014	Year Ended June 30, 2013	% Change 2015/2014	% Change 2014/2013
Contributions	$205,047,170	$187,398,786	$173,703,401	9	8
Net Investment Income	92,645,423	319,445,655	198,139,438	-71	61
Other Income	148	125	1,650	18	-92
Net Additions	$297,692,741	$506,844,566	$371,844,489	-41	36
Benefits	$241,714,876	$231,384,708	$224,518,100	4	3
Administrative Expenses	4,066,944	3,736,355	2,997,225	9	25
Total Deductions	$245,781,820	$235,121,063	$227,515,325	5	3
Net Increase	$51,910,921	$271,723,503	$144,329,164	-81	88
Net Position-Beginning	1,957,456,213	1,685,732,710	1,541,403,546	16	9
Net Position-Ending	$2,009,367,134	$1,957,456,213	$1,685,732,710	**3**	**16**

The main component of the changes in contributions to MPERS is employer contributions. In FY15 the contribution rate for the non-uniformed Highway Patrol and MoDOT increased by 4.51% and the contribution rate for the uniformed Highway Patrol increased by 2.96% from the FY14 rates, therefore increasing the FY15 amount of employer contributions. In FY14 the contribution rate for the non-uniformed Highway Patrol and MoDOT increased by 3.33% and the contribution rate for the uniformed

Highway Patrol increased by 0.20% from the FY13 rates, therefore increasing the FY14 amount of employer contributions.

Net investment income, a primary component of plan additions, resulted in income of over $92 million for FY15. The income represented a 6.62% return for the fiscal year ended June 30, 2015. In comparison, the FY14 gain of over $319 million represented an investment return of 17.59%. Annual fluctuations within the broad investment markets are outside of the control of the System and are expected to fluctuate from year to year. The Board of Trustees has approved a diversified asset allocation that, over time, is expected to realize the assumed actuarial rate of investment return of 7.75%.

Administrative expenses increased in FY15 due to adding investment staff and moving to an outsourced hosted IT solution.

Benefits increased primarily due to increases in benefit rolls for all of the years shown.

CURRENTLY KNOWN FACTS AND RECENT EVENTS

Based on the June 30, 2014 actuarial valuation, the Board of Trustees approved a slight decrease in the required state contribution, effective July 1, 2015. The rate applied to non-uniformed payroll (MoDOT, civilian patrol, and MPERS) will decrease from 58.76% to 58.05%. The rate applied to uniformed patrol payroll will decrease from 58.19% to 57.76%. The decrease in both rates is primarily due to positive investment returns.

Based on the June 30, 2015 actuarial valuation, the Board of Trustees approved a change in the required state contribution rate, effective July 1, 2016. The rate applied to non-uniformed payroll (MoDOT, civilian patrol, and MPERS) will decrease slightly from 58.05% to 58.00%. The rate applied to uniformed patrol payroll will increase from 57.76% to 58.00%. The decrease in the non-uniformed rate is primarily due to positive investment returns. The increase in the uniformed rate is primarily due to liability experience losses.

In June 2012, the Governmental Accounting Standards Board (GASB) approved new accounting and reporting standards for pensions provided by state and local governments. The new statements are GASB 67, Financial Reporting for Pension Plans and GASB 68, Accounting and Financial Reporting for Pensions. GASB 67 applies to MPERS and other state and local pension plans established as trusts, implemented in fiscal years beginning after June 15, 2013. GASB 68 applies to the employers that participate in MPERS as well as other governmental employers that sponsor or contribute to pension plans, implemented in fiscal years beginning after June 15, 2014. The new accounting and reporting standards break the link between accounting and funding. While these changes affect the accounting measures, they do not have an effect on the actuarial methods and assumptions used by MPERS to determine the employer contributions needed to fund the plan. The new standards, however, impact

the financial statement presentation for pension accounting and related disclosures for MPERS and participating employers. MPERS implemented both GASB 67 and GASB 68 in FY14.

CONTACTING THE RETIREMENT SYSTEM'S MANAGEMENT

This financial report is designed to provide a general overview of the System's finances. Questions about this report or requests for additional financial information should be sent to:

MoDOT and Patrol Employees' Retirement System
PO Box 1930
Jefferson City, MO 65102-1930
mpers@mpers.org

MoDOT AND PATROL EMPLOYEES' RETIREMENT SYSTEM

Jefferson City, Missouri

STATEMENTS OF FIDUCIARY NET POSITION

As of June 30, 2015 and 2014

		2015		2014
ASSETS:				
Cash	$	359,068	$	194,136
Receivables				
Contributions		8,392,952		7,705,671
Accrued Interest and Income		4,264,812		7,241,177
Investment Sales		10,567,358		97,323
Other		22,389		18,506
Total Receivables		23,247,511		15,062,677
Investments, at Fair Value				
Stocks and Rights/Warrants	$	495,604,884	$	595,943,370
Government Obligations		187,018,431		145,598,291
Corporate Bonds		27,747,634		32,651,714
Real Estate		199,368,748		203,400,219
Mortgages and Asset-Backed Securities		210,369,202		176,678,785
Hedge Funds (Absolute Return)		235,475,642		204,257,912
Short-Term Investments		61,592,254		39,766,147
Venture Capital & Partnerships		574,219,602		539,413,897
Total Investments		1,991,396,397		1,937,710,335
Invested Securities Lending Collateral	$	80,780,418	$	86,192,337
Prepaid Expenses		6,366		5,899
Net Investment in Capital Assets				
Land		84,000		84,000
Building		581,619		581,619
Furniture, Equipment and Software		3,508,918		3,506,428
Accumulated Depreciation		(2,253,070)		(1,888,086)
Net Investment in Capital Assets		1,921,467		2,283,961
TOTAL ASSETS	**$**	**2,097,711,227**	**$**	**2,041,449,345**
LIABILITIES:				
Accounts Payable	$	1,702,210	$	1,554,399
OPEB Obligation		643,809		599,399
Security Lending Collateral		83,705,424		75,609,005
Investment Purchases		2,292,650		6,230,329
TOTAL LIABILITIES	**$**	**88,344,093**	**$**	**83,993,132**
NET POSITION RESTRICTED FOR PENSIONS	**$**	**2,009,367,134**	**$**	**1,957,456,213**

See accompanying Notes to the Financial Statements.

MoDOT AND PATROL EMPLOYEES' RETIREMENT SYSTEM

Jefferson City, Missouri

STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION

For the Years Ended June 30, 2015 and 2014

		2015		2014
ADDITIONS:				
Contributions-Employer	$	200,638,571	$	183,353,841
Contributions-Employee		2,086,000		1,282,379
Contributions-Service Transfers from Other System		1,114,437		1,784,382
Contributions-Other		1,208,162		978,184
Total Contributions		205,047,170		187,398,786
Investment Income from Investing Activities				
Net Appreciation in Fair Value of Investments	$	59,440,132	$	296,466,951
Interest and Dividends		55,794,806		42,844,252
Less: Investment Expenses		22,797,145		20,130,262
Net Investment Income		92,437,793		319,180,941
Income from Securities Lending Activities				
Securities Lending Gross Income	$	208,633	$	258,110
Less: Securities Lending Expenses (Income), net		1,003		(6,604)
Net Income from Securities Lending Activities		207,630		264,714
Other Income	$	148	$	125
NET ADDITIONS	**$**	**297,692,741**	**$**	**506,844,566**
DEDUCTIONS:				
Monthly Benefits	$	241,714,876	$	231,384,708
Administrative Expenses		4,066,944		3,736,355
TOTAL DEDUCTIONS	**$**	**245,781,820**	**$**	**235,121,063**
NET INCREASE	$	51,910,921	$	271,723,503
NET POSITION RESTRICTED FOR PENSIONS				
Beginning of Year		**1,957,456,213**		**1,685,732,710**
End of Year	**$**	**2,009,367,134**	**$**	**1,957,456,213**

See accompanying Notes to the Financial Statements.

NOTES TO THE FINANCIAL STATEMENTS

For the Years Ended June 30, 2014 and 2013

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

As established under Section 104.020 of the Revised Statutes of Missouri (RSMo), the Missouri Department of Transportation and Highway Patrol Employees' Retirement System (MPERS) is a body corporate and an instrumentality of the State of Missouri (State). Due to the nature of MPERS' reliance on funding from the Missouri Department of Transportation (MoDOT) and the Missouri State Highway Patrol (MSHP) and control of the overall plan document by the legislative and executive branches of state government, MPERS is considered a part of the State of Missouri financial reporting entity and is included in the State's financial reports as a component unit shown as a pension trust fund.

Note 1 (a) – Basis of Accounting

The financial statements were prepared using the accrual basis of accounting. Contributions are due to MPERS when employee services have been performed and paid. Contributions are recognized as revenues when due, pursuant to statutory requirements. Benefits are recognized when due and payable and expenses are recorded when the corresponding obligations are incurred. Dividend income is recognized when dividends are declared. Interest income is recognized when earned.

In June 2012, the Governmental Accounting Standards Board (GASB) approved new accounting and reporting standards for pensions provided by state and local governments. The new statements are GASB 67, Financial Reporting for Pension Plans and GASB 68, Accounting and Financial Reporting for Pensions. GASB 67 applies to MPERS and other state and local pension plans established as trusts, implemented in fiscal years beginning after June 15, 2013. GASB 68 applies to the employers that participate in MPERS as well as other governmental employers that sponsor or contribute to pension plans, implemented in fiscal years beginning after June 15, 2014. MPERS implemented both GASB 67 and GASB 68 in FY14.

The requirements for GASB 67 include changes in presentation of the financial statements, notes to the financial statements, and required supplementary information. Significant changes include an actuarial calculation of total and net pension liability. It also includes comprehensive footnote disclosure regarding the pension liability, the sensitivity of the net pension liability to the discount rate, and increased investment activity disclosures. The total pension liability, determined in accordance with GASB 67, is presented in Note 7 and in the Required Supplementary Information.

GASB 68 requires participating employers recognize a liability for their proportionate share of net pension liability. It also requires participating employers recognize pension expense and report deferred outflows and inflows of resources related to pensions for their proportionate share of collective pension expense and collective deferred outflows and inflows or resources related to pensions. The employer proportionate share is discussed in Note 8.

Note 1 (b) – Method Used to Value Investments

Investments are reported at fair value on a trade date basis. Bonds and stocks traded on a national or international exchange are valued at the reported sales price at current exchange rates.

Mortgages are valued on the basis of future principal and interest payments and are discounted at prevailing interest rates for similar instruments. The fair value of real estate and timber investments are based on net asset value estimates provided by the general partners' administrators or portfolio managers, which are compared to independent appraisals. Investments that do not have an established market are reported at estimated fair value. The fair value of the hedge fund (absolute return) and venture capital and partnership portfolios are based on valuations of the underlying companies as reported by the general partner or portfolio manager.

Note 1 (c) - Net Investment in Capital Assets

MPERS capitalizes assets with an expected useful life greater than one year and a cost greater than $1,000. Capital assets are depreciated on the straight-line method over the estimated useful lives of the related assets. The estimated useful lives are as follows:

Furniture, Equipment and Software	3 - 10 years
Building and Improvements	30 years

Note 1 (d) - Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

NOTE 2 - PLAN DESCRIPTIONS AND CONTRIBUTION INFORMATION

MPERS is a body corporate and an instrumentality of the state as a multiple-employer, public employee retirement system with one plan that has three benefit structures known as the Closed Plan, the Year 2000 Plan, and the Year 2000 Plan-2011 Tier. The plan provides retirement, survivor, and disability benefits for employees of MoDOT, MSHP, and MPERS' staff. The plan is administered in accordance with the requirements of a cost sharing, multiple-employer, public employee retirement plan under the Revised Statutes of Missouri. In MPERS are vested the powers and duties specified in sections 104.010 to 104.312, 104.601 to 104.805, and 104.1003 to 104.1093, RSMo., and such other powers as may be necessary or proper to enable it, its officers, employees, and agents to carry out fully and effectively all the purposes outlined pursuant to these sections. Responsibility for the operation and administration of the System is vested in the Board of Trustees, which consists of eleven members, four elected by the active and retired plan members, three Highway and Transportation Commissioners, a State Senator appointed by the President Pro-Tem of the Senate, a State Representative appointed by the Speaker of the House, and the Director of the MoDOT and Superintendent of the MSHP who serve as ex-officio members. Detailed information regarding contributions can be found in Note 5.

Generally, all covered employees hired before July 1, 2000 are eligible for membership in the Closed Plan. All covered employees hired on or after July 1, 2000 and before January 1, 2011 are eligible for membership in the Year 2000 Plan. All covered employees hired on or after January 1, 2011 are eligible for membership in the Year 2000 Plan's 2011 Tier.

Membership in the Closed Plan, Year 2000 Plan, and 2011 Tier as of June 30

	2015			2015	2014
	Closed	Year 2000	2011 Tier	Total	Total
Retirees, Beneficiaries, and Disabilities Currently Receiving Benefits	5,090	3,529	2	8,621	8,438
Terminated Employees Entitled to But Not Yet Receiving Benefits	1,564	736	0	2,300	2,222
Active Employees					
Vested	3,062	2,600	0	5,662	5,977
Non-Vested	2	155	1,554	1,711	1,438
Total Membership	**9,718**	**7,020**	**1,556**	**18,294**	**18,075**

Closed Plan Description

Employees covered by the Closed Plan are fully vested for benefits upon receiving 5 years of creditable service. Under the Closed Plan, MoDOT and civilian employees may retire with full benefits upon the earliest of attaining:

- Age 65 with 4 or more years of creditable service (active);
- Age 65 with 5 or more years of creditable service (terminated & vested);
- Age 60 with 15 or more years of creditable service (active or terminated & vested); or
- "Rule of 80" - at least age 48 with sum of member's age and service equaling 80 or more (active or terminated & vested).

The following provisions apply for uniformed patrol members of the Closed Plan:

- Age 55 with 4 or more years of creditable service (active);
- Age 55 with 5 or more years of creditable service (terminated & vested);
- "Rule of 80" - at least age 48 with sum of member's age and service equaling 80 or more (active or terminated & vested); or
- Mandatory retirement at age 60 (active).

All non-uniformed members may retire early, with reduced benefits, at age 55 with at least 10 years of creditable service.

The base benefit in the Closed Plan is equal to 1.6% multiplied by the final average pay multiplied by years of creditable service. For members of the uniformed patrol, the base benefit is calculated by applying the same formula, then multiplying the product by 1.333333.

Retired uniformed members will receive an additional benefit of $90 per month, plus cost-of-living adjustments (COLAs), until attainment of age 65. This payment, however, is reduced by any amount earned during gainful employment. This benefit is not available to uniformed members hired after January 1, 1995.

For members employed prior to August 28, 1997, COLAs are provided annually based on 80% of the increase in the consumer price index for all urban consumers for the United States (CPI-U). The minimum rate is 4% and the maximum rate is 5%, until the cumulative amount of COLAs equals 65% of the original benefit. Thereafter, the 4% minimum rate is eliminated and the annual COLA rate will be equal to 80% of the increase in the CPI-U (annual maximum of 5%). For members employed on or after August 28, 1997, COLAs are provided annually based on 80% of the increase in the CPI-U, up to a maximum rate of 5%.

The BackDROP is a payment option that is available to eligible members upon retirement. This option provides for a benefit to be calculated as if the member elected to retire at a previous date. If the BackDROP is elected, the monthly benefit payable on the actual retirement date is based on the benefit that would have been received by the member had he/she left employment and retired on the BackDROP date. In addition, the member will receive a lump sum payment equal to 90% of the life income annuity amount the member would have received during the BackDROP period. This lump sum amount includes any COLAs and other benefit increases; also, credit will be received for the unused sick leave balance as of the date of retirement.

The life income annuity payment option (which contains no provision for survivorship) and the life income with 60 or 120 month guaranteed payment options are available to all members. Joint and 50% or 100% survivor options are available if married at the time of retirement. In the Closed Plan, the reduction for the joint & 100% survivor option is based on the difference between the age of the member and the survivor. There is no reduction for the joint and 50% survivor option.

If a reduced joint and survivor option is chosen at the time of retirement and the spouse precedes the member in death, the benefit will revert back (pop-up) to a normal annuity.

Members may name a new spouse as beneficiary if:

- They were single at retirement and since married;
- They elected a spouse option at the time of retirement, the spouse preceded the member in death, and then a remarriage occurred.

The member has 1 year from the date of marriage to re-elect a payment option and name a new spouse.

All members who retire from active employment or long-term disability, or begin receiving normal or work-related disability benefits, on or after September 28, 1985, are provided a $5,000 death benefit payable to designated beneficiaries.

<u>**Year 2000 Plan Description**</u>

Employees covered by the Year 2000 Plan are fully vested for benefits upon earning 5 years of creditable service. Under the Year 2000 Plan, MoDOT and civilian employees may retire with full benefits upon the earliest of attaining:

- Age 62 and with 5 or more years of creditable service (active or terminated & vested);
- "Rule of 80" - at least age 48 with sum of member's age and service equaling 80 or more (active).

The following provisions apply for uniformed patrol members of the Year 2000 Plan:

- "Rule of 80" - at least age 48 with sum of member's age and service equaling 80 or more (active);
- Mandatory retirement at age 60 with 5 or more years of creditable service (active only).

All members may retire early with reduced benefits at age 57 with at least 5 years of creditable service.

The base benefit in the Year 2000 Plan is equal to 1.7% multiplied by the final average pay multiplied by years of creditable service. Members retiring under the Rule of 80, and uniform patrol members retiring at the mandatory retirement age (currently 60) with 5 years of creditable service, receive an additional

temporary benefit until age 62. The temporary benefit is equivalent to 0.8% multiplied by final average pay multiplied by years of creditable service.

COLAs are provided annually based on 80% of the increase in the CPI-U, up to a maximum rate of 5%.

The BackDROP is a payment option that may be available to members upon retirement. This option provides for a monthly benefit to be calculated as if the member elected to retire at a previous date. If the BackDROP is elected, the monthly benefit payable on the actual retirement date is based on the benefit that would have been received by the member had he/she left employment and retired on the BackDROP date. In addition, the member will receive a lump sum payment equal to 90% of the life income annuity amount the member would have received during the BackDROP period. This lump sum amount includes any temporary benefits, COLAs and other benefit increases; also, credit will be received for the unused sick leave balance as of the date of retirement.

The life income annuity payment option (with no provision for survivorship) and the life income with 120 or 180 months guaranteed payment options are available to all members. Joint and 50% or 100% survivorship options are available if married at the time of retirement. The reduction for the joint and 50% or 100% survivor options is based on the member's age at retirement, as well as the age difference between the member and the survivor.

If a reduced joint and survivor option is chosen at the time of retirement and the spouse precedes the member in death, the benefit will revert back (pop-up) to a normal annuity.

Members may name a new spouse for survivor benefits if:

- They were single at retirement and since married;
- They elected a spouse option at the time of retirement, the spouse preceded the member in death, and then a remarriage occurred.

The member has 1 year from the date of marriage to re-elect the payment option and name a new spouse.

All members who retire from active employment or long-term disability, or begin receiving work-related disability benefits, on or after July 1, 2000, are provided a $5,000 death benefit payable to designated beneficiaries.

<u>Year 2000 Plan-2011 Tier Description</u>

Employees covered by the 2011 Tier are fully vested for benefits upon earning 10 years of creditable service. Under the 2011 Tier, MoDOT and civilian employees may retire with full benefits upon the earliest of attaining:

- Age 67 and with 10 or more years of creditable service (active or terminated & vested);
- "Rule of 90" - at least age 55 with sum of member's age and service equaling 90 or more (active only).

Active MoDOT and civilian employees may retire early with reduced benefits at age 62 with at least 10 years of creditable service.

The following provisions apply for uniformed patrol members of the 2011 Tier:

- Age 55 and with 10 or more years of creditable service (active only);
- Mandatory retirement at age 60 with no minimum service amount (active only).

Terminated and vested uniformed patrol employees may retire at age 67 with 10 or more years of creditable service.

The base benefit in the 2011 Tier is equal to 1.7% multiplied by the final average pay multiplied by years of creditable service. Members retiring under the Rule of 90, and uniform patrol members retiring at the mandatory retirement age (currently 60) or at age 55 with 10 years of creditable service, receive an additional temporary benefit until age 62. The temporary benefit is equivalent to 0.8% multiplied by final average pay multiplied by years of creditable service.

COLAs are provided annually based on 80% of the change in the CPI-U, up to a maximum rate of 5%.

The life income annuity payment option (with no provision for survivorship) and the life income with 120 or 180 months guaranteed payment options are available to all members. Joint and 50% or 100% survivorship options are available if married at the time of retirement. The reduction for the joint and 50% or 100% survivor options is based on the member's age at retirement, as well as the age difference between the member and the survivor.

If a reduced joint and survivor option is chosen at the time of retirement and the spouse precedes the member in death, the benefit will revert back (pop-up) to a normal annuity.

Members may name a new spouse for survivor benefits if:

- They were single at retirement and since married;
- They elected a spouse option at the time of retirement, the spouse preceded the member in death, and then a remarriage occurred.

The member has 1 year from the date of marriage to re-elect the payment option and name a new spouse.

All members who retire from active employment or long-term disability, or begin receiving work-related disability benefits, on or after January 1, 2011, are provided a $5,000 death benefit payable to designated beneficiaries.

Contributions

Beginning January 1, 2011, employee contributions of 4% of gross pay are required for those covered by the Year 2000 Plan-2011 Tier.

Employer contributions are determined through annual actuarial valuations. Administrative expenses are financed through contributions from participating employers and investment earnings.

Participating employers are required to make contributions to the plan based on the actuarially determined rate. Prior to August 13, 1976, contributions by all plan members were required. Accumulated employee contributions made prior to that time, plus interest, were refunded to applicable members. Maximum contribution rates were eliminated August 13, 1976. Detailed information regarding contributions can be found in Note 5.

Schedule of Funded Status and Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Percent Funded (a/b)	Annual Covered Payroll (c)	UAAL Percentage of Covered Payroll ((b-a)/c)
6/30/2015	$1,967,001,509	$3,715,845,651	$1,748,844,142	52.94%	$342,264,593	510.96%

The schedule of funding progress in the *Actuarial Section* presents multiyear trend information about whether the actuarial values of plan assets are increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

The actuarial assumptions used in the June 30, 2015 valuation were based on the results of an actuarial experience study for the period July 1, 2007 - June 30, 2012.

Additional Information as of the June 30, 2015 Actuarial Valuation follows:

Valuation Date	6/30/2015
Actuarial Cost Method	Entry Age
Amortization Method	Closed, Level Percent of Payroll
Remaining Amortization Period	16 Years*
Asset Valuation Method	3-Year Smoothing
Actuarial Assumptions:	
Investment Rate of Return	7.75%
Projected Salary Increases	3.5% to 11%
COLAs	2.4% Compound
Price Inflation	3.0%

*single equivalent period

NOTE 3 - DEPOSITS AND INVESTMENTS

The Board of Trustees has established policies and procedures by which funds are invested by bank custodians and investment managers. Section 104.150, RSMo, provides the authority for the board to invest MPERS funds. Plan assets are invested in a diversified portfolio following prudent standards for preservation of capital, with the goal of achieving the highest possible rate of return consistent with MPERS' tolerance for risk. The Board of Trustees establishes MPERS' policy in regard to the allocation of invested assets, and may amend the policy. The following is MPERS current asset allocation policy:

Asset Class	Target Allocation
Global Equity	30%
Private Equity	15%
Fixed Income	25%
Real Assets	5%
Real Estate	10%
Hedge Funds	15%
Cash	0%

Note 3 (a) - Deposit and Investment Risk Policies

Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of the System's

investment in a single issuer. Within the traditional asset classes (equities and fixed income), the consultant will aggregate exposures across asset classes to create measures of concentration including industries, countries and security issuer for Investment staff review.

Investment Custodial Credit Risk

Custodial credit risk is an investment risk that, in the event of the failure of the counterparty to a transaction, the System will not be able to recover the value of its investment or the collateral securities that are in the possession of an outside party. Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in the name of the System, and are held by either: a) the counterparty or b) the counterparty's trust department or agent but not in the System's name. It is the policy of the System to require that all investments be clearly marked as to ownership and, to the extent possible, shall be registered in the name of the System.

Cash Deposit Custodial Credit Risk

Cash deposit custodial credit risk is the risk that, in the event of the failure of depository financial institution, the System will not be able to recover deposits or will not be able to recover collateral securities that are in the possession of an outside party. Missouri state law requires that all public funds must be collateralized with acceptable securities having market values of at least 100% of the amount of funds on deposit (less any amount covered by FDIC insurance).

Market Risk

Market risk is the risk that the fair value of an investment will be adversely impacted due to a change in value of the underlying market. The three primary market risks prevalent in the System's investment portfolio are equity prices, interest rates, and foreign currencies. Equity risk is the risk that stock prices fall and/or the volatility in the equity market increases. Interest rate risk is the risk that fixed income securities (or any investment primarily valued on a yield basis) will drop in value due to an increase in interest rates. Currency risk is the risk that changes to foreign exchange rates will adversely impact the fair value of non-U.S. Dollar denominated assets. The System protects the portfolio against market risks by adopting a diversified asset allocation that limits the amount of exposure to each underlying market risk. Market risks are also controlled by monitoring the types, amounts, and degree of risk that each investment manager takes for their specific mandate.

Investment Credit Risk

Investment credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. Unless authorized under a separate Investment Management Agreement or operating agreement, it is the policy of the System to limit fixed income managers to purchasing securities that possess a minimum credit rating of "Baa" by Moody's and "BBB" by Standard & Poor's. Issues subsequently downgraded below these ratings must be brought to the attention of the Chief Investment Officer. Where counterparty risk is present, the System's investment managers seek to control credit risk through counterparty credit evaluations and approvals, counterparty credit limits and exposure monitoring procedures.

<u>Note 3 (b) - Cash Deposits</u>

Cash balances include short-term securities held by the custodial bank to meet future obligations and operating balances held by the depository bank. As of June 30, 2015 and 2014, MPERS had carrying amount of deposits of ($127,348) and ($38,925), respectively, and a bank balance of $1 and $2, respectively. The FDIC covered the bank balances. To maximize investment income, cash

is invested in overnight repurchase agreements, thus causing the negative cash amounts disclosed above. The balances in these repurchase agreements at June 30, 2015 and 2014 were $486,416 and $233,061, respectively. As of June 30, 2015 and 2014, no investments were held as repurchase agreements that were uninsured or unregistered, with securities held by the counterparty or by its trust department or agent but not in MPERS' name.

Note 3 (c) - Concentrations

No investments in any one organization (other than those issued or sponsored by the U.S. government and those in pooled investments) represent 5% of plan net position.

Note 3 (d) - Rate of Return

For the years ended June 30, 2015 and 2014, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 6.71% and 17.58%, respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Note 3 (e) - Investments

The following table shows MPERS' investments by type.

Summary of Investments by Type at June 30

	2015		2014	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
Government Obligations	$180,913,855	$187,018,431	$141,084,282	$145,598,291
Corporate Bonds	26,467,031	27,747,634	31,435,313	32,651,714
Stock and Rights/Warrants	366,823,175	495,604,884	416,551,454	595,943,370
Real Estate	181,625,918	199,368,748	178,784,181	203,400,219
Mortgages & Asset-Backed Securities	206,349,682	210,369,202	162,913,148	176,678,785
Hedge Funds (Absolute Return)	190,555,442	235,475,642	160,996,066	204,257,912
Limited Partnerships	488,929,018	574,219,602	442,844,448	539,413,897
Short-Term Investments	62,078,670	62,078,670	39,999,208	39,999,208
Securities Lending Collateral	80,780,418	80,780,418	86,192,337	86,192,337
Total Investments	$1,784,523,209	2,072,663,231	$1,660,800,437	2,024,135,733
Reconciliation to Statement of Fiduciary Net Position:				
Less: Repurchase Agreements		(486,416)		(233,061)
Less: Securities Lending Collateral		(80,780,418)		(86,192,337)
Investments per Statement of Fiduciary Net Position		$1,991,396,397		$1,937,710,335

Certain investments are not listed on national exchanges, over-the-counter markets, nor do they have quoted market prices. Their valuation is based on the most current net asset values, activities through year-end, independent appraisals, and/or good faith estimates of the investments fair value provided by the general partner or portfolio manager. The estimated fair value of these investments may differ significantly from values that would have been used had a ready market existed. The following investments were priced using those methods and comprised 51% of the total fair value of the System's investments as of June 30, 2015:

Real Estate	$199,368,748
Hedge Funds (Absolute Return)	235,475,642
Limited Partnerships	574,219,602
	$1,009,063,992

Note 3 (f) - Investment Interest Rate Risk

The following table summarizes the maturities of government obligations, corporate bonds, convertible corporate bonds, mortgages, and asset-backed securities which are exposed to interest rate risk.

Summary of Weighted Average Maturities

Investment Type	Fair Value	Investment Maturities (in years) as of 6/30/15			
		less than 1	1 - 5	6 - 10	more than 10
Asset-Backed Securities	$59,353,277	$845,857	$3,116,147	$27,976,859	$27,414,414
Commercial Mortgage-Backed Securities	63,986,730	0	2,058,307	0	61,928,423
Corporate Bonds	16,063,854	1,013,530	3,769,094	495,941	10,785,289
Government Agencies	70,379,870	786,377	1,174,320	9,806,811	58,612,362
Government Bonds	5,029,376	0	0	0	5,029,376
Government Mortgage-Backed Securities	50,704,052	0	0	3,843,239	46,860,813
Government-issued Commercial Mortgage-Backed	9,551,830	0	2,938,399	0	6,613,431
Index Linked Govt Bonds	23,690,938	0	0	16,015,298	7,675,640
Municipal/Provincial Bonds	87,918,246	0	4,684,398	18,602,431	64,631,417
Non-Govt Backed C.M.O.s	26,773,313	0	340,490	0	26,432,823
Total	$413,451,486	$2,645,764	$18,081,155	$76,740,579	$315,983,988
Pooled Investments	11,683,781				
Grand Total	$425,135,267				

Note 3 (g) - Investment Credit Ratings

The following table summarizes the credit ratings of the government obligations, corporate bonds, Mortgages, and asset-backed securities.

Summary of Credit Ratings

Investment Type	Quality Rating	6/30/2015 Fair Value	6/30/2014 Fair Value
Asset-Backed Securities	AAA	$40,566,775	$3,748,513
Asset-Backed Securities	AA	11,888,727	9,589,678
Asset-Backed Securities	CC	845,857	1,143,616
Asset-Backed Securities	not rated	6,051,918	147,135
Commercial Mortgage-Backed Securities	AAA	4,043,149	2,599,704
Commercial Mortgage-Backed Securities	A	4,996,225	5,158,445
Commercial Mortgage-Backed Securities	BBB	6,749,366	6,901,704
Commercial Mortgage-Backed Securities	BB	349,504	363,707
Commercial Mortgage-Backed Securities	B	10,638,640	15,814,022
Commercial Mortgage-Backed Securities	CCC	6,120,382	11,115,641
Commercial Mortgage-Backed Securities	D	0	3,976,088
Commercial Mortgage-Backed Securities	not rated	29,286,558	28,267,388
Commercial Mortgage-Backed Securities	us gov guar	1,802,906	0
Corporate Bonds	AA	5,305,275	5,293,652
Corporate Bonds	A	249,698	250,710
Corporate Bonds	BBB	202,216	1,132,590
Corporate Bonds	not rated	10,306,665	14,491,885
Government Agencies	AA	68,823,057	47,460,435
Government Agencies	us gov guar	1,556,813	1,419,984
Government Bonds	us gov guar	5,029,376	4,858,124
Government Mortgage-Backed Securities	not rated	5,476,788	5,707,688
Government Mortgage-Backed Securities	us gov guar	45,227,264	61,019,468
Govt issue Commercial Mortgage-Backed Securities	AAA	943,058	0
Govt issue Commercial Mortgage-Backed Securities	not rated	0	2,359,211
Govt issue Commercial Mortgage-Backed Securities	us gov guar	8,608,772	8,208,095
Index Linked Government Bonds	us gov guar	23,690,938	24,248,914
Municipal/Provincial Bonds	AAA	20,963,586	16,927,158
Municipal/Provincial Bonds	AA	54,553,111	42,072,533
Municipal/Provincial Bonds	A	2,658,714	420,707
Municipal/Provincial Bonds	not rated	9,742,835	8,190,436
Non-Government Backed C.M.O.s	AA	1,187,235	1,569,219
Non-Government Backed C.M.O.s	A	945,966	1,192,862
Non-Government Backed C.M.O.s	BB	618,727	278,359
Non-Government Backed C.M.O.s	B	745,231	118,456
Non-Government Backed C.M.O.s	CCC	1,636,744	422,795
Non-Government Backed C.M.O.s	CC	283,232	89,547
Non-Government Backed C.M.O.s	D	9,611,081	803,114
Non-Government Backed C.M.O.s	not rated	11,745,097	6,084,330
Pooled Investments	not rated	11,683,781	11,482,877
Total		**$425,135,267**	**$354,928,790**

Note 3 (h) - Investment Foreign Currency Risk

Exposure to Foreign Currency Risk as of June 30

Foreign Currency	Equities	Real Estate/ Partnerships	2015 Total	2014 Total
Australian Dollar	$1,226,071	$0	$1,226,071	$1,560,255
British Pound Sterling	1,442,249	8,810,985	10,253,234	5,784,728
Euro	1,622,094	15,461,203	17,083,297	23,085,996
Hong Kong Dollar	694,546	0	694,546	0
Japanese Yen	1,288,375	0	1,288,375	1,801,689
Singapore Dollar	0	0	0	395,460
Total Exposure Risk	$6,273,335	$24,272,188	$30,545,523	$32,628,128

Note 3 (i) - Securities Lending

In accordance with the Board of Trustees' investment policy, MPERS participates in a securities lending program. The Northern Trust Company administers the program. There are no restrictions on the amount of securities that may be lent.

Securities that may be loaned include U.S. government and agency securities, corporate equity, and fixed income securities. Collateral may include cash, U.S. government securities and irrevocable letters of credit. U.S. securities are loaned in exchange for collateral valued at 102% of the fair value of the securities, plus any accrued interest. Non-U.S. securities are loaned in exchange for collateral valued at 105% of the fair value of the securities, plus any accrued interest. On June 30, 2015 and 2014, MPERS had no credit risk exposure to borrowers, since the amount of collateral exceeded the amount of the loans.

Non-cash collateral cannot be pledged or sold unless the borrower defaults. The average term of the System's loans was approximately 105 days and 95 days, as of June 30, 2015 and June 30, 2014, respectively. Cash open collateral is invested in a short-term investment pool, which had an interest sensitivity of 26 days and 37 days, as of June 30, 2015 and 2014, respectively. Cash collateral may also be invested separately in "term loans", in which case the investments match the loan term. These loans can be terminated on demand by either lender or borrower. There were no known violations of legal or contractual provisions, or borrower or lending agent default losses. There were no dividends or coupon payments owing on the securities lent. Securities lending earnings are credited on approximately the fifteenth day of the following month.

Indemnification deals with a situation in which a client's securities would not be returned due to the insolvency of a borrower and Northern Trust would fail to live up to its contractual responsibilities relating to the lending of those securities. Northern Trust's responsibilities include performing appropriate borrower and collateral investment credit analyses and demanding adequate types and levels of collateral.

The collateral held (including both cash collateral recognized in the Statement of Fiduciary Net Position and non-cash collateral) was as follows at June 30:

Collateral Held

Investment Type	2015	2014
Equities	$74,689,586	$68,070,631
Government & government sponsored securities	7,838,159	6,483,650
Corporate bonds	1,177,679	1,054,724
	$83,705,424	**$75,609,005**

Note 3 (j) - Derivatives

A derivative financial instrument is an investment whose value depends on the values of one or more underlying assets, financial indexes, or commodity prices. These investments include futures contracts, options contracts, and forward foreign currency exchange. Derivative financial instruments involve credit risk and market risk, as described in Note 3 (a), in varying levels. The notional value related to these derivative instruments are generally not recorded on the financial statements; however, the change in market value of these instruments is incorporated in performance. The notional/market value of $80,413,805 and $20,184,080 for the various contracts in MPERS' portfolio as of June 30, 2015 and 2014, respectively, is recorded in investments on the Statement of Fiduciary Net Position. The change in fair value of $80,401,785 and $20,184,080 for the years ended June 30, 2015 and 2014, respectively, is recorded in investment income on the Statement of Changes in Fiduciary Net Position.

Investment Derivatives as of June 30, 2015

Type	Classification	Notional/ Market Value	Cost	Unrealized Gain (Loss)
Futures Contracts	Investments, at fair value	$81,189,900	$0	$81,189,900
Swap Contracts	Investments, at fair value	(788,115)	0	(788,115)
Rights/Warrants	Investments, at fair value	12,020	12,020	$0
		$80,413,805	**$12,020**	**$80,401,785**

Investment Derivatives as of June 30, 2014

Type	Classification	Notional/ Market Value	Cost	Unrealized Gain (Loss)
Futures Contracts	Investments, at fair value	20,184,080	0	$20,184,080
		$20,184,080	**$0**	**$20,184,080**

Through the use of derivatives, MPERS is exposed to risk that the counterparties involved in the contracts are unable to meet the terms of their obligation. MPERS' investment managers seek to control this risk through counterparty credit evaluations and approvals, counterparty credit limits, and exposure monitoring procedures. MPERS anticipates the counterparties will be able to satisfy their obligations under the contracts. The associated counterparty's credit rating is an A-.

NOTE 4 - RECEIVABLES

Receivables at June 30 consisted of the following:

Receivables

Type	2015	2014
Contributions-MoDOT	$5,182,989	$4,796,972
Contributions-MSHP Non-Uniformed	1,122,234	1,013,551
Contributions-MSHP Uniformed	1,957,324	1,754,607
Contributions-Retirement System	130,405	140,542
Amounts Due from Members	2,796	0
Commission Recapture	692	2,796
Securities Lending	18,901	15,710
Investment Interest & Income	4,264,812	7,241,176
Investment Sales	10,567,358	97,323
	$23,247,511	**$15,062,677**

NOTE 5 - CONTRIBUTIONS

MoDOT, the Highway Patrol, and MPERS make contributions to the System, as do employees covered under the Year 2000 Plan-2011 Tier. MPERS permanent funding policy provides for actuarially determined employer contributions using the entry-age normal cost method on a closed group basis (consisting of normal cost and amortization of any unfunded accrued liabilities over a 30-year period, beginning July 1, 2006). (The objective is to reduce the period by one year each year.) A temporary accelerated policy has been adopted where the total contribution is based on entry-age normal cost plus a 15-year amortization period for unfunded retiree liabilities and a 30-year amortization period for other unfunded liabilities. Both amortization periods are closed periods starting July 1, 2010. This temporary accelerated policy was adopted by the MPERS' Board of Trustees on September 17, 2009 and will remain in effect until such time as the retiree liability becomes 100% funded or the permanent policy produces a higher contribution rate. Actuarially determined rates, expressed as percentages of annual covered payroll, provide for amounts sufficient to fund those benefits designated by state statute to be funded in advance. Actuarial assumptions used to compute contribution requirements are the same as those used to compute the pension benefit obligation. The employee contribution rate for members of the Year 2000 Plan-2011 Tier is set by statute.

Required employer contributions totaling $200,638,571 and $183,353,841 for fiscal years 2015 and 2014, respectively, represent funding of normal costs and amortization of the unfunded accrued liability. Actual contributions made were 100% of required contributions. Contribution rates as determined by the System's actuary for the years ended June 30, 2015 and 2014 are shown in the following table. The Board established actual rates to be the same as the actuarially determined rates.

Contribution Rates

2015			2014		
MoDOT, MPERS & Civilian Patrol	Uniformed Patrol	2011 Tier Employee	MoDOT, MPERS & Civilian Patrol	Uniformed Patrol	2011 Tier Employee
58.76%	58.19%	4.00%	54.25%	55.23%	4.00%

At the September 26, 2014 Board meeting, the Board adopted the use of a contribution stabilization reserve that would result in an MPERS employer contribution rate similar to the fiscal year 2015 rates. The reserve is intended to keep the contribution relatively level over time and may be used if the market experiences a downturn in the future. The Board further adopted (in February 2015) that the employer contribution rate would not fall below 58% unless 1) the fund became fully funded or 2) the contribution stabilization reserve reached $250 million. The balance of the reserve as of June 30, 2015 and June 30, 2014 was $140,830,104 and $77,644,000, respectively.

NOTE 6 - DEFERRED RETIREMENT OPTION PROGRAM

MPERS currently provides a BackDROP option. This is an election made at the time of actual retirement. In effect, it provides members an option to elect to receive a portion of their benefits as cash. Since the election is not made until the member actually retires, the option is not treated as a DROP provision in accordance with generally accepted accounting principles.

NOTE 7- NET PENSION LIABILITY OF EMPLOYERS

The components of the net pension liability of the employers at June 30, 2015, were as follows:

Total pension liability	$3,715,845,651
Plan fiduciary net position	(2,009,367,134)
Employers' net pension liability	$1,706,478,517

Plan fiduciary net position as a percentage of the total pension liability 54.08%

Covered Employee Payroll $342,264,593

Employers' net pension liability as a percentage of covered employee payroll 498.58%

The components of the net pension liability of the employers at June 30, 2014, were as follows:

Total pension liability	$3,650,241,741
Plan fiduciary net position	(1,957,456,213)
Employers' net pension liability	$1,692,785,528

Plan fiduciary net position as a percentage of the total pension liability 53.63%

Covered Employee Payroll $336,590,797

Employers' net pension liability as a percentage of covered employee payroll 502.92%

Actuarial Assumptions

The total pension liability amounts were determined by actuarial valuations as of June 30, 2015 and 2014, using the following actuarial assumptions, applied to all prior periods included in the measurement:

Inflation	3.0%
Salary Increases	3.5% to 11%
Investment Rate of Return	7.75%

The mortality tables, for post-retirement mortality, used in evaluating allowances to be paid to non-disabled pensioners were the R-P 2000 Combined Healthy Mortality Tables projected 16 years and set back 1 year for males and females. Pre-retirement mortality used was 70% for males and 50% for females of the post-retirement tables set back 1 year for males and set back 1 year for females. Disabled pension mortality was based on PBGC Disabled mortality tables. The healthy mortality tables include a margin for mortality improvement. The margin is in the 16-year projection. The disabled mortality tables do not include a margin for mortality improvement.

The long-term (30 year) expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return were adopted by the plan's trustees after considering input from the plan's investment consultant(s) and actuary(s). These estimates for each major asset class included in MPERS' target asset allocation as of June 30, 2015 and 2014 (see NOTE 3) are summarized in the following table:

	Long-Term Expected Real Rate of Return	
Asset Class	**2015**	**2014**
Global Equity	4.80%	5.05%
Private Equity	6.50%	6.75%
Fixed Income	0.50%	0.59%
Real Assets	4.75%	4.75%
Real Estate	2.75%	2.75%
Hedge Funds	3.00%	3.25%

Discount Rate

A single discount rate of 7.75% was used to measure the total pension liability. This single discount rate was based on the expected rate of return on pension plan investments of 7.75%. The projection of cash flows used to determine this single discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Regarding the sensitivity of the net pension liability to changes in the single discount rate, the following presents the plan's net pension liability, calculated using a single discount rate of 7.75%, as well as what the plan's net pension liability would be if it were calculated using a single discount rate that is 1-percentage-point lower or 1-percentage-point higher:

	1% Decrease 6.75%	**Current Single Discount Rate Assumption 7.75%**	**1% Increase 8.75%**
2015 Net Pension Liability	$2,133,261,040	$1,706,478,517	$1,328,460,451
2014 Net Pension Liability	$2,147,696,770	$1,712,973,102	$1,350,461,630

NOTE 8 - EMPLOYER PROPORTIONATE SHARE

MPERS, as the administrative agent for the pension system, is also an employer of the pension system. The administrative expenses of the pension system are included in the deductions to the pension system's fiduciary net position. While the employer contributions of the other participating employers are funded from outside revenue sources, the employer contributions of MPERS are funded from sources already recognized as revenues, such as earnings on plan investments or contributions paid by the other participating employers. Attempting to allocate a portion of the net pension liability to MPERS as an employer would result in an allocation of the net pension liability to the other participating employers. Accordingly, MPERS excludes its contributions from the employer proportionate share calculation for the reporting of a net pension liability, by assigning itself a proportionate share of 0%. This exclusion in essence shifts the portion of the net pension liability that would accrue to MPERS to the other participating employers.

NOTE 9 - PERSONAL SERVICES AND RETIREMENT PLAN

MPERS employed 16 full-time employees on June 30, 2015 and 17 on June 30, 2014. Seven former MPERS employees have retired. Full-time employees are also members of the System. For these employees, MPERS accrued 58.76% of payroll during FY15, amounting to $907,064, which was equal to the required contribution. The net obligations for FY15 and the two preceding years are shown below. These amounts are recorded as both a contribution and administrative expense. Information regarding the retirement plans can be found in Notes 2 and 5.

Net Obligations

Year Ended	Annual Required Contribution		Percent	Net
June 30	Percent	Dollars	Contributed	Obligation
2013	50.92[(1)]	562,535	100	$0
2014	54.25[(1)]	739,002	100	$0
2015	58.76[(1)]	907,064	100	$0

[(1)] The Annual Required Contribution rate is equal to the Actuarially Required Contribution rate.

NOTE 10 - OTHER POST-EMPLOYMENT BENEFITS (OPEB)

In addition to the retirement benefits described previously, MPERS provides a portion of health care insurance through the MoDOT and MSHP Medical and Life Insurance Plan (Insurance Plan) in accordance with Missouri State statutes. The Insurance Plan is considered an agent multiple-employer defined benefit plan administered by MoDOT. Medical insurance benefits are established by the Insurance Plan's Board of Trustees and are approved by the Missouri Highways and Transportation Commission. Benefits include general inpatient and outpatient medical services; mental, nervous and substance abuse care; and prescriptions. Eligible members are employees who retired from the System with a minimum of 5 years of service and who participate

in the Insurance Plan. MoDOT issues a publicly available financial report that includes financial statements and required supplementary information for the Insurance Plan. Requests for this report should be addressed to MoDOT, Controller's Division, P.O. Box 270, Jefferson City, MO 65102.

Employer and member contributions are established by the Insurance Plan's Board of Trustees and are approved by the Missouri Highways and Transportation Commission. Premiums vary by coverage categories, which include retirees, certain disabled employees, spouses, certain dependents, and survivors of deceased employees and retirees. Member and employer required contribution rates average approximately 31.1% and 68.9%, respectively. The Insurance Plan is financed on a pay-as-you-go basis and is an internal service fund of MoDOT.

MoDOT's actuarial valuations for the Insurance Plan are performed biennially. The July 1, 2013 actuarial valuation was used for the FY15 and FY14 financial statements. For these periods, the annual required contribution (ARC) is equal to the annual OPEB cost. MPERS contributed $33,025 in both FY15 and FY14 (38.5% of the ARC), including implicit rate subsidies. Although funding is not related to payroll amounts, an equivalent Annual Required Contribution (ARC) rate would be 6.4% and 7.1% of annual covered payroll of $1,320,846 and $1,203,673 for FY15and FY14, respectively. MPERS' share of the net OPEB obligation was $643,809 and $599,399 at June 30, 2015 and 2014, respectively. MPERS' share of the changes in the Insurance Plan's net OPEB obligation is shown as follows:

OPEB Cost and Obligation for the Year Ended June 30,

	2015	2014	2013
Normal Cost	$31,597	$31,597	$60,443
Amortization Payment	50,392	50,392	61,594
Interest	30,663	28,637	26,188
Adjustment to ARC	(35,217)	(32,572)	(27,022)
Annual OPEB Cost	77,435	78,054	121,203
Contributions	(33,025)	(33,025)	(26,739)
Increase in Net OPEB Obligation	44,410	45,029	94,464
Net OPEB Obligation - Beginning of Year	599,399	554,370	459,906
Net OPEB Obligation - End of Year	$643,809	$599,399	$554,370
% of Annual OPEB Cost Contributed	42.6%	42.3%	22.1%

Because the Insurance Plan is an internal service fund of MoDOT, the Insurance Plan's assets have not been set aside. Because of this, there is no actuarial value of assets, so the entire actuarial accrued liability (AAL) is unfunded. Based on an actuarial report dated July 1, 2013, MPERS' portion of the AAL is $857,676, which is equal to MPERS' portion of the unfunded actuarial accrued liability (UAAL), as shown below.

Actuarial Accrued Liability

Actuarial Accrued Liability	$857,676
Actuarial Value of Assets	0
Unfunded Actuarial Accrued Liability (UAAL)	$857,676
Funded Ratio (Actuarial Value of Plan Assets/AAL)	0%
Covered Payroll	$1,320,846
UAAL as a Percentage of Covered Payroll	65%

Actuarial valuations of an ongoing plan reflect long-term perspective and involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. These calculations are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future. A schedule of funding progress is presented as required supplementary information following the notes to the financial statements. The schedule of funding progress represents multi-year trend information about whether the actuarial value of plan assets is increasing or decreasing relative to the AAL for benefits.

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employers and plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employers and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations. The actuarial methods and assumptions utilized in the valuation are shown on the following table.

Actuarial Methods and Assumptions

Actuarial Cost Method	Projected Unit Credit
UAAL Amortization Method	Level Dollar Amount
UAAL Amortization Period	30 Years
UAAL Amortization Approach	Open
Investment Return (Discount) Rate	4.5%
Healthcare Cost Trend Rate	8%, Decreasing To 5% in 2017
Admin Expense Trend (Inflation) Rate	4.0%

NOTE 11 - CAPITAL ASSETS

Summary of Changes in Capital Assets

	6/30/2014 Balance	Additions	Deletions/ Retirements	6/30/2015 Balance
Land	$84,000	$0	$0	$84,000
Buildings	581,619	0	0	581,619
Furniture, Equipment and Software	3,506,428	2,489	0	3,508,917
Less: Accumulated Depreciation	(1,888,086)	(364,983)	0	(2,253,069)
Total	**$2,283,961**	**($362,494)**	**$0**	**$1,921,467**

	6/30/2013 Balance	Additions	Deletions/ Retirements	6/30/2014 Balance
Land	$84,000	$0	$0	$84,000
Buildings	581,619	0	0	581,619
Furniture, Equipment and Software	3,479,053	27,375	0	3,506,428
Less: Accumulated Depreciation	(1,517,469)	(370,617)	0	(1,888,086)
Total	**$2,627,203**	**($343,242)**	**$0**	**$2,283,961**

NOTE 12 - RISK MANAGEMENT

MPERS is exposed to various risks of loss related to natural disasters, asset theft or damage, errors and omissions, torts, and employee injuries.

MPERS has purchased commercial insurance related to capital asset loss and damage. Ancillary coverage provided through the property policy includes coverage for accounts receivable, loss of money and securities, employee dishonesty, and forgery and alterations. MPERS carries a $2 million umbrella liability policy. MPERS has coverage through Missouri Highway and Transportation Commission's Self-Insurance Fund related to workers' compensation. MPERS' has also purchased an executive risk insurance package that includes directors and officers liability ($1 million aggregate coverage), employment practices liability ($1 million aggregate coverage) and fiduciary liability coverage ($5 million aggregate coverage). These coverages are inclusive of legal defense costs and each policy carries a $25,000 deductible. The State's Legal Expense Fund covers all state employees and officers, and MPERS has purchased surety bonds for the executive director and staff. Settlements have not exceeded coverages for each of the past three fiscal years.

MPERS has a disaster recovery plan that provides for continued computer operations at a remote location should the retirement office be unavailable for normal operations.

NOTE 13 - COMMITMENTS

As of June 30, 2014, MPERS has $330,297,313 unfunded commitments to purchase alternative investments.

REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF THE EMPLOYERS' NET PENSION LIABILITY

As of June 30,

	2015	2014	2013
Total Pension Liability	$3,715,845,651	$3,650,241,741	$3,583,975,559
Plan Fiduciary Net Position	2,009,367,134	1,957,456,213	1,685,732,710
Employers' Net Pension Liability	$1,706,478,517	$1,692,785,528	$1,898,242,849
Plan Fiduciary Net Position as a % of Total Pension Liability	54.08%	53.63%	47.04%
Covered Employee Payroll	$342,264,593	$336,590,797	$323,205,767
Employers' Net Pension Liability as a % of Employee Covered Payroll	498.58%	502.92%	587.32%

SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY

Year Ended June 30,

	2015	2014	2013
Total Pension Liability			
Service Cost	$ 45,358,095	$ 44,739,603	$ 44,446,279
Interest on the Total Pension Liability	275,284,910	270,525,608	265,339,848
Difference Between Expected and Actual experience	(13,324,219)	(17,614,321)	(13,690,794)
Assumption Change			204,396,180
Benefit Payments	(236,905,323)	(227,958,108)	(220,623,394)
Refunds	(107,395)	(18,686)	(29,300)
Disability Premiums	(1,554,676)	(1,531,578)	(1,512,685)
Transfers to Other Retirement Systems	(3,147,482)	(1,876,336)	(629,246)
Net Change in Total Pension Liability	65,603,910	66,266,182	277,696,888
Total Pension Liability - Beginning	3,650,241,741	3,583,975,559	3,306,278,671
Total Pension Liability - Ending (a)	$ 3,715,845,651	$ 3,650,241,741	$ 3,583,975,559
Plan Fiduciary Net Position			
Contributions - Employer	$ 200,638,571	$ 183,353,841	$ 170,836,117
Contributions - Employee	3,294,162	2,260,563	1,139,450
Pension Plan Net Investment Income	92,645,571	319,445,780	198,141,088
Benefit Payments	(236,905,323)	(227,958,108)	(220,619,035)
Refunds	(107,395)	(18,686)	(29,300)
Disabilty Premiums	(1,554,676)	(1,531,578)	(1,512,685)
Pension Plan Administrative Expense	(4,066,944)	(3,736,355)	(2,997,225)
Net Transfers	(2,033,045)	(91,954)	(629,246)
Net Change in Plan Fiduciary Net Position	51,910,921	271,723,503	144,329,164
Plan Fiduciary Net Position - Beginning	1,957,456,213	1,685,732,710	1,541,403,546
Plan Fiduciary Net Position - Ending (b)	$ 2,009,367,134	$ 1,957,456,213	$ 1,685,732,710
Employers' Net Pension Liability - Ending (a) - (b)	$ 1,706,478,517	$ 1,692,785,528	$ 1,898,242,849

Note: These schedules are intended to present information for 10 years, but may be built prospectively. Additional years will be displayed as they become available.

REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF EMPLOYERS' CONTRIBUTIONS
Last 10 Fiscal Years

	Actuarially Determined Contribution	Actual Contributions	Contribution Deficiency (Excess)	Covered Employee Payroll	Contributions as a Percentage of Employee Covered Payroll
2006	$ 111,271,679	$ 111,271,679	$ 0	$ 343,113,410	32.43
2007	121,243,361	121,243,361	0	372,140,457	32.58
2008	123,323,265	123,323,265	0	375,527,604	32.84
2009	122,613,975	122,613,975	0	379,140,306	32.34
2010	124,052,534	124,052,534	0	376,258,823	32.97
2011	149,952,750	149,952,750	0	363,345,651	41.27
2012	164,884,467	164,884,467	0	344,514,139	47.86
2013	170,836,117	170,836,117	0	329,863,134	51.79
2014	183,353,841	183,353,841	0	336,799,855	54.44
2015	200,638,571	200,638,571	0	342,211,446	58.63

SCHEDULE OF INVESTMENT RETURNS
Last 10 Fiscal Years

Fiscal Year Ended June 30	Annual Money-Weighted Rate of Return
2006	14.95%
2007	18.09%
2008	-2.41%
2009	-24.70%
2010	12.92%
2011	21.75%
2012	2.74%
2013	13.38%
2014	17.58%
2015	6.62%

REQUIRED SUPPLEMENTARY INFORMATION

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation Date ....June 30, 2015
Actuarial Cost Method..Entry Age
Amortized Method ....Level Percentage of Payroll, Closed
Remaining Amortization Period...16 Years (single equivalent period)
Asset Valuation Method .... 3-Year Smoothed Market: 20% Corridor
Inflation ....3.0% (price inflation)
Actuarial Assumptions:
    Investment Rate of Return 7.75%
    Projected Salary Increase.. 3.5% to 11% (including 3.5% wage inflation)
    Cost-of-Living Adjustments.. 2.4% Compound

REQUIRED SUPPLEMENTARY INFORMATION

OTHER POST-EMPLOYMENT BENEFIT PLAN (OPEB)
SCHEDULE OF FUNDING PROGRESS
FOR MODOT AND MSHP MEDICAL AND LIFE INSURANCE PLAN

Year Ended June 30	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)
2008	$0	$1,178,303	$1,178,303	0%
2010[1]	0	1,036,681	1,036,681	0%
2012	0	1,048,333	1,048,333	0%
2014	0	857,676	857,676	0%

[1]New assumptions adopted.

Actuarial valuations are performed biennially. The July 1, 2013 actuarial valuation was used for FY15 and FY14 financial statements, the July 1, 2011 actuarial valuation was used for FY12 and FY13 financial statements, the July 1, 2009 actuarial valuation was used for FY10 and FY11 financial statements, and the July 1, 2007 actuarial valuation was used for FY08 and FY09 financial statements. This reporting requirement is being implemented prospectively, as prior years' data is not available.

Because this plan is an internal service fund of MoDOT, assets have not been set aside. Therefore, there is no actuarial value of assets. This results in a calculated funded ratio of zero percent.

NOTES TO THE OPEB SCHEDULE OF FUNDING PROGRESS

The information presented in the above schedule was determined as part of the actuarial valuation at the date indicated. Additional information as of the latest actuarial valuation follows:

Valuation Date .... July 1, 2013
Actuarial Cost Method .... Projected Unit Credit
UAAL Amortization Method .... Level Dollar Amount
UAAL Amortization Period .... 30 Years
UAAL Amortization Approach .... Open
Investment Return (discount) Rate 4.5%
Healthcare Cost Trend Rate .... 8.0%, Decreasing to 5% in 2017
Admin Expense Trend (Inflation) Rate 4.0%

MoDOT AND PATROL EMPLOYEES' RETIREMENT SYSTEM

SCHEDULES OF ADMINISTRATIVE EXPENSES

FOR THE YEARS ENDED JUNE 30, 2015 AND 2014

	2015	2014
Personal Services:		
Salary Expense	$1,553,492	$1,208,775
Employee Benefit Expense	1,242,311	1,281,751
Total Personal Services	$2,795,803	$2,490,526
Professional Services:		
Actuarial Services	$104,286	$122,310
Audit Expense	61,855	34,500
Disability Program	8,256	11,648
Consultant Fees	65,693	76,626
IT Hosting and Support	298,953	212,764
Fiduciary Insurance	71,402	65,305
Other	4,252	13,588
Total Professional Services	$614,697	$536,741
Miscellaneous:		
Depreciation	$365,108	$370,617
Meetings/Travel/Education	99,847	117,751
Equipment/Supplies	51,068	79,091
Printing/Postage	39,882	64,334
Bank Service Charge	8,661	8,666
Building Expenses	35,025	39,977
Other	56,853	28,652
Total Miscellaneous	$656,444	$709,088
Total Administrative Expenses	$4,066,944	$3,736,355

MoDOT AND PATROL EMPLOYEES' RETIREMENT SYSTEM

SCHEDULES OF INVESTMENT EXPENSES
FOR THE YEARS ENDED JUNE 30, 2015 AND 2014

	2015	2014
Investment Income Expenses:		
Management and Performance Fees		
Aberdeen Asset Management	$18,858	$11,662
ABRY Partners	984,251	306,214
Acadian Asset Management	535,561	617,808
Achievement Fund (formerly Peak 6)	284,767	467,797
AEW	241,330	286,333
Albourne	480,000	360,000
American Infrastructure MLP	394,012	226,672
Alyeska	303,385	0
Anchorage Capital	749,609	893,425
Apollo Real Estate	323,958	175,849
AQR Capital Management	386,446	340,179
Audax Group	19,509	35,487
Barclays Global Investors	48,730	184,450
Bernzott	245,051	166,582
Blue Trend	22,281	182,057
Brevan Howard	162,364	303,212
Bridgewater Associates	1,093,020	993,310
Capital Partners	194,634	178,105
CBRE	109,752	1,268,455
Cevian	306,461	952,542
Clifton	63,297	96,250
CarVal Investors (CVI)	(509,613)	201,632
Deephaven Capital Management	161	1,192
EIF Management	132,768	130,736
Energy & Mineral Group Midstream Resource	780,231	219,401
Enhanced Investment Technologies (INTECH)	444,946	458,918
GMO	351,989	256,033
Golub	148,341	193,455
Grove Street Advisors	1,375,000	1,500,000
Gryphon	322,850	164,260
GSO	484,580	676,890
Indus	774,448	0
ING Clarion	468,707	439,817
Kennedy	190,410	0
Koppenberg	43,247	0
KPS	73,833	8,476
Luxor	410,542	(54,478)
M&G	81,901	6,366
Metacapital	451,200	249,808
Millenium	705,347	0
Natural Gas Partners	589,653	389,032
Ned Davis	30,000	35,000
Northern Shipping	435,359	0
Och-Ziff Real Estate	813,947	722,212
OCP	288,301	197,424
Orion	252,835	0
Ospraie	68,231	(455,493)
PFM	(79,202)	339,366
Pinnacle Associates	300,228	160,825
Principal Global Investors	1,158,452	1,135,169
Ridgewood	328,350	300,000
RMK Timberland	76,058	119,973
Rothschild Asset Management	0	96,021
Schroders	0	5,528
Sciens	130,000	0
Shore	120,000	0
Silchester International Investors	731,662	689,854
Stark Investments (Shepard)	13,359	21,760
Stellium	64,244	545,002
Structured Portfolio Management (SPM)	0	28,316
Taconic	167,525	604,129
Tessera	257,571	142,186
Torchlight	568,847	0
Tortoise	399,925	444,850
Tristan	145,675	0
Turnbridge	74,722	0
Urdang	17,100	33,538
ValueAct	745,772	881,105
Vectis	264,106	168,750
Western Asset Management Company	0	41,578
Total Management and Performance Fees	$21,660,884	$19,145,020
Investment Custodial Fee	59,097	78,703
Performance Management	140,667	113,821
General Consultant (monitoring) Fee	318,552	312,000
Other Investment Expenses	617,945	480,718
Total Investment Income Expenses	$22,797,145	$20,130,262
Securities Lending Expenses:		
Borrower Rebates (Refunds)	($87,411)	($98,833)
Bank Fees	88,414	92,229
Total Securities Lending Expenses (Income)	$1,003	($6,604)

MoDOT AND PATROL EMPLOYEES' RETIREMENT SYSTEM

SCHEDULES OF CONSULTANT AND PROFESSIONAL EXPENSES

FOR THE YEARS ENDED JUNE 30, 2015 AND 2014

	2015	2014
Actuarial Services	$104,286	$122,310
Audit Services	61,855	34,500
Disability Administrative Services	8,256	11,648
Legislative Consultant	30,000	30,035
Customer Service and Benefit Delivery	0	10,000
Insurance Consultant	6,000	6,000
Other Consultant Fees	29,693	30,591
Fiduciary Insurance	71,402	65,305
IT Hosting and Support	298,953	212,764
Other	4,252	13,588
Total Consultant and Professional Expenses	$614,697	$536,741

MISSOURI DEPARTMENT OF TRANSPORTATION AND HIGHWAY PATROL EMPLOYEES' RETIREMENT SYSTEM

COMMUNICATION OF AUDIT RELATED MATTERS

JUNE 30, 2015

WILLIAMS KEEPERS LLC
CERTIFIED PUBLIC ACCOUNTANTS & CONSULTANTS

2005 West Broadway, Suite 100, Columbia, MO 65203
OFFICE (573) 442-6171 FAX (573) 777-7800

3220 West Edgewood, Suite E, Jefferson City, MO 65109
OFFICE (573) 635-6196 FAX (573) 644-7240

www.williamskeepers.com

November 10, 2015

To the Audit Committee of the Board of Trustees of the
Missouri Department of Transportation and
Highway Patrol Employees' Retirement System

We have audited the financial statements of the Missouri Department of Transportation and Highway Patrol Employees' Retirement System (the System) for the year ended June 30, 2015, and have issued our report thereon dated November 10, 2015. Professional standards require that we provide you with information about our responsibilities under generally accepted auditing standards, as well as certain information related to the planned scope and timing of our audit. We have communicated such information to the System's Chairman of the Audit Committee of the Board of Trustees in a letter dated August 26, 2015. Professional standards also require that we communicate to you the following information related to our audit.

Significant Audit Findings

Qualitative Aspects of Accounting Practices

Management is responsible for the selection and use of appropriate accounting policies. In accordance with the terms of our engagement letter, we will advise management about the appropriateness of accounting policies and their application. The significant accounting policies used by the Plan are described in Note 1 to the financial statements. No new accounting policies were adopted and the application of existing policies was not changed during 2015. We noted no transactions entered into by the Plan during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

In June 2012, the Governmental Accounting Standards Board (GASB) issued Statements No. 67 *Financial Reporting for Pension Plans* which revises existing standards of financial reporting for pension plans and No. 68 *Accounting and Financial Reporting for Pensions* which improves accounting and financial reporting by state and local governments for pensions.

- GASB No. 67 applies to the System and other state and local pension plans established as trusts, which the System implemented for the 2014 fiscal year. The implementation of GASB No. 67 resulted in additional note disclosures and required supplementary information.

- GASB No. 68 applies to the employers that participate in the Systems and was effective for fiscal years beginning after June 15, 2014. The System elected to early implement GASB 68 for the 2014 fiscal year. Although this significantly changed the financial reporting for other participating employers, the System's financial statements were not directly impacted as no GASB 68 liability is recorded. Since the contributions on behalf of the System's employees are actually funded through sources already recognized as income, such as investment earnings, the System is not directly liable for the net pension liability. However, the System did produce a report on the Schedule of Pension Information for Participating Employers, which included a schedule of employer allocations and a

schedule of pension amounts by employer, to assist its participating employers in their implementation of GASB 68.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimates affecting the financial statements were: fair value of investments, useful lives of capital assets, and employers' net pension liability and related disclosures.

Management's estimate of the fair value of investments is based on quoted market prices; input from outside investment managers, consultants, and general partners; and current economic conditions. Estimated useful lives of capital assets are generally based on past experience with similar assets. Employers' net pension liability and related disclosures are based on actuarial methods and assumptions determined in consultation with the System's actuary. We evaluated the key factors and assumptions used to develop those estimates in determining that they are reasonable in relation to the financial statements taken as a whole.

The disclosures in the financial statements are neutral, consistent and clear. Certain financial statement disclosures are particularly sensitive because of their significance to the financial statement users. The most sensitive disclosures affecting the financial statements were investments, the funded status of the plan, and the net pension liability of employers.

Difficulties Encountered in Performing the Audit

We are pleased to report that we encountered no difficulties in dealing with management in performing and completing our audit. All system personnel cooperated with us fully during the conduct of our audit.

Corrected and Uncorrected Misstatements

Professional standards require us to accumulate all known and likely misstatements identified during the audits, other than those that are trivial, and communicate them to the appropriate level of management. For purposes of this letter, professional standards define a significant audit adjustment as a proposed correction to the financial statements that, in our judgment, may not have been detected except through our auditing procedures. These adjustments may include those proposed by us but not recorded by the System that potentially cause future financial statements to be materially misstated, even though we have concluded that such an adjustment is not material to the current financial statements. We proposed no audit adjustments that could, in our judgment, either individually, or in the aggregate, have a significant effect on the System's financial reporting process.

Disagreements with Management

For purposes of this letter, professional standards define a disagreement with management as a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

Management Representations

We have requested certain representations from management that are included in the management representation letter dated November 10, 2015.

Management Consultations with Other Independent Accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the System's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

Other Audit Findings or Issues

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the System's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

Other Matters

We have been advised that the audited financial statements will be reproduced in the System's Comprehensive Annual Financial Report (CAFR). Our responsibility for the other information in the CAFR does not extend beyond the financial information identified in the report and, as auditors, we do not have an obligation to perform any procedures to corroborate other information contained in the CAFR. We will not have audited or performed other procedures on this other information and we do not express an opinion or provide any assurance on it.

We will proof-read the financial statements as prepared for the CAFR for agreement with our issued audit reports and to determine that the manner of presentation is not misleading.

We applied certain limited procedures to the management's discussion and analysis and the schedules of changes in the net pension liability, employer contributions and investment returns, which are required supplementary information (RSI) that supplements the basic financial statements. Our procedures consisted of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We did not audit the RSI and do not express an opinion or provide any assurance on the RSI.

We were engaged to report on the schedules of administrative expenses and professional/consultant fees and schedules of investment expenses and internal investment activity expenses, and investment summary, which accompany the basic financial statements but are not RSI. With respect to this supplementary information, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the information complies with U.S. generally accepted auditing standards, the method of preparing it has not changed from the prior period, and the information is appropriate and complete in relation to our audit of the basic financial statements. We compared and reconciled the supplementary information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves.

We were not engaged to report on the introductory, investment, actuarial and statistical sections, which accompany the basic financial statements but are not RSI. We did not audit or perform other procedures on this other information and we do not express an opinion or provide any assurance on them.

Restriction on Use

This information is intended solely for the use of Board of Trustees and management of the Systems and is not intended to be, and should not be, used by anyone other than these specified parties.

We will be pleased to discuss these or any other matters deemed appropriate at your convenience. We would like to thank the Systems' administration and staff for the excellent level of cooperation we received with respect to preparation for the audits and responsiveness to requests for information and documentation throughout the audits.

Sincerely,

Williams-Keepers LLC

WILLIAMS-KEEPERS LLC

MISSOURI DEPARTMENT OF TRANSPORTATION AND HIGHWAY PATROL EMPLOYEES' RETIREMENT SYSTEM

MANAGEMENT LETTER

JUNE 30, 2015

WILLIAMS KEEPERS LLC
CERTIFIED PUBLIC ACCOUNTANTS & CONSULTANTS

2005 West Broadway, Suite 100, Columbia, MO 65203
OFFICE (573) 442-6171 FAX (573) 777-7800

3220 West Edgewood, Suite E, Jefferson City, MO 65109
OFFICE (573) 635-6196 FAX (573) 644-7240

www.williamskeepers.com

November 10, 2015

To the Board of Trustees and Management of the
Missouri Department of Transportation and
Highway Patrol Employees' Retirement System

In planning and performing our audit of the financial statements of the Missouri Department of Transportation and Highway Patrol Employees' Retirement System (the System) for the year ended June 30, 2015, in accordance with U.S. generally accepted auditing standards, we considered the System's internal control over financial reporting (internal control) as a basis for designing our auditing procedures for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the System's internal control. Accordingly, we do not express an opinion on the effectiveness of the System's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the Systems' financial statements will not be prevented, or detected and corrected, on a timely basis. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph and was not designed to identify all deficiencies in internal control that might be material weaknesses. In addition, because of inherent limitations in internal control, including the possibility of management override of controls, misstatements due to error or fraud may occur and not be detected by such controls. Given these limitations, we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

However, we did become aware of certain deficiencies in internal control that we consider to be significant deficiencies. The following items summarize our comments and suggestions regarding those deficiencies.

CONTINUING RECOMMENDATIONS

3rd PARTY IT PROVIDER CONTROLS

During the 2014 fiscal year, the System contracted with a 3rd party IT provider to host the System's pension administration system and associated lines of business applications. We noted the System has not received a Service Organization Controls (SOC) 2 report from this IT provider. SOC 2 reports are examination engagements undertaken by a service auditor to report on controls at an organization that provides services to user entities when those controls are likely to be relevant to user entities' internal control over financial reporting. These reports specifically address controls related to security, availability, processing integrity, confidentiality, and privacy. As such, we were unable to determine if the controls in place at the 3rd party IT

provider adequately address risks related to physical security, change management, and backup & recovery. The System could be putting its information at risk if the IT provider has not implemented proper controls. We recommend the System request the IT provider make available a SOC 2, Type 2 report. The System can then use this information to assess the adequacy of controls in place at the IT provider as well as determine the extent of controls the System should implement to minimize its risk in this area.

MANAGEMENT'S RESPONSE:

We concur. MPERS has initiated discussions with the 3rd party provider requesting they have the necessary testing performed to issue a SOC report. The 3rd party provider plans to have the initial SOC 2 readiness completed by July 31, 2016 to confirm all processes and procedures are in place. Then over the next 12 months, the vendor's audit firm will be testing the processes and procedures to validate they operate as stated, and issue a SOC 2, Type 2 audit report.

PRIOR YEAR RECOMMENDATIONS PARTIALLY IMPLEMENTED

DISASTER RECOVERY PLAN

The System does not presently have well-defined, written disaster recovery procedures. The time to make contingency plans is before disaster strikes, so that all personnel will be aware of their responsibilities in the event of an emergency situation that precludes the use of the existing IT facilities. We suggest management develop a disaster recovery plan that includes, but is not limited to, the following matters:

- Location of, and access to, off-site storage;
- A listing of all data files that would have to be obtained from the off-site storage location;
- Identification of a back-up location (name and telephone number) with similar or compatible equipment for emergency processing (Management should make arrangements for such back-up with another company, a computer vendor, or a service center. The agreement should be in writing.);
- Responsibilities of various personnel in an emergency;
- Priority of critical applications and reporting requirements during the emergency period.

Status: MPERS' staff is developing a full disaster recovery and business continuity plan. The full disaster recovery and business continuity plan is expected to be completed and appropriately documented during fiscal year 2016. Testing of the full plan is planned for fiscal year 2017.

We will be pleased to discuss these or any other matters deemed appropriate at your convenience. This report is intended solely for the information and use of the Board of Trustees, management, and others within the System and is not intended to be and should not be used by anyone other than these specified parties.

Sincerely,

Williams-Keepers LLC

WILLIAMS- KEEPERS LLC